

RETROSPECTIVE REPORTS OF CHILDHOOD RELATIONSHIPS AND
ASSOCIATIONS WITH ADULT ANXIETY AND DEPRESSION

A Thesis

Presented to the

Faculty of the College of Graduate Studies of

Angelo State University

In Partial Fulfillment of the

Requirements for the Degree

MASTER OF SCIENCE

by

ALYSSA PARISETTE-SPARKS

December 2016

Major: Applied Psychology

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by

ALYSSA PARISETTE-SPARKS

APPROVED:

Dr. Crystal Kreitler

Dr. Kristi Cordell-McNulty

Dr. Drew Curtis

Dr. Charles Pier

December 2016

APPROVED:

Dr. Susan E. Keith
Dean, College of Graduate Studies

ACKNOWLEDGEMENTS

Most importantly, I would like to thank my committee chair, research supervisor, and thesis advisor, Dr. Crystal Kreidler. She took a chance on me, and both of us embarked on a new journey. I am so thankful and appreciative of all the feedback, time, and support she has provided me throughout this project.

I would also like to thank our Program Director, Dr. Kristi Cordell-McNulty. She has helped me multiple times since I applied to join the Angelo community and was kind enough to also join my committee. Her feedback has been instrumental in making this thesis what it has become.

Further, Dr. Drew Curtis provided critical feedback that made this paper nearly publication ready through his critical analysis and input.

Lastly, I'd like to thank my remaining committee member: Dr. Charles Pier. He added an extra layer to this thesis and provided influential feedback that would have left it lacking without.

ABSTRACT

Despite being two of the most significant mental disorders, limited research has been conducted to investigate childhood antecedents of anxiety and depression in adults outside of traumatic events. Parenting styles and peer relationship factors have been implicated in childhood psychopathology. This study sought to find associations between college students' current anxiety and/or depression symptomatology, and their retrospective reports of childhood parenting style factors and peer relationships. Participants ($N = 206$) were recruited through a local University and all questionnaires were completed online. Correlational analysis revealed significant associations between current depression symptoms and childhood bullying and victimization. Also, anxiety symptoms were associated with victimization. MANOVA results revealed significant differences between mother's over control, indifference, and abuse with current depression and anxiety scores. Father's abuse was also associated with current depression. This research shows that effects from important early relationships can be long lasting, and highlights the need for appropriate interventions.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	iii
ABSTRACT.....	iv
TABLE OF CONTENTS.....	v
INTRODUCTION	1
METHOD	10
Participants.....	10
Materials	10
Symptoms of Generalized Anxiety.....	10
Symptoms of Depression	11
Retrospective Peer-Relationships	11
Retrospective Parenting Style	12
Procedure	12
RESULTS	14
Correlation	14
MANOVA.....	14
ANOVA	16
DISCUSSION	18
Limitations	20
Implications.....	21
TABLES & FIGURES.....	23
Table 1	23
Figure 1	24
Figure 2	25
REFERENCES	26
APPENDIX.....	33
Demographics Questionnaire Part 1	33
Demographics Questionnaire Part 2	34

INTRODUCTION

In 2015, the National Institute of Mental Health found the 12-month prevalence of anxiety and depression in U.S. adults to be 18.1% and 6.6%, respectively (Center for Behavioral Health Statistics and Quality, 2015). Given the number of adults that suffer from these mental disorders, sources and antecedents of the conditions have been sought. Beck (1967) founded the Cognitive-Behavioral Model in an effort to explain the behavioral and cognitive factors that influence the development of anxiety and depression in individuals. His model attributes the development of depression and anxiety to environmental and psychosocial distress, leading to distorted and dysfunctional perceptions. These perceptions fuel consistent automatic thoughts that influence their basic understanding of their world, including themselves. Beck (1967) also believed that the cognitive effects of distress and negative perception precipitates the hormonal and affective mood disruptions of depression, contrary to what some research has suggested. This model acknowledges the impact of an individuals' perspective and thoughts that may be contributing to their psychopathology.

Moreover, children can also experience symptoms of anxiety, depression, or a comorbid combination of both (Center for Behavioral Health Statistics and Quality, 2015). Studies have found parenting style (Laurin, Joussemet, Tremblay, & Boivin, 2015; McLeod, Weisz, & Wood, 2007), peer-relationships (Brumariu, Obsuth, & Lyons-Ruth, 2013; Gibb, Abramson, & Alloy, 2004), and environmental risk factors, such as family violence or trauma exposure, (Briggs-Gowan et al., 2015; Barber, Kohl, Kassam-Adams, & Gold, 2014)

to be associated with anxiety and depression symptomatology in childhood. For example, Gibb, Abramson, and Alloy (2004) conducted a study on college students to determine if peer verbal victimization was predictive of depression symptoms outside of parental emotional maltreatment. All 349 participants completed a Cognitive Styles and Dysfunctional Attitudes measure and were organized into high or low risk groups based on the combination of those measure results. These participants then completed the Schedule for Affective Disorders and Schizophrenia- Lifetime measure to determine their current Affective Disorder symptomatology, the Life Experiences Questionnaire to determine emotional maltreatment by parents, as well as ratings of verbal peer victimization. Results revealed that verbal peer victimization significantly predicated students' high risk for cognitive depression. The researchers did also note that a significant source of the reported victimization was from respondents' own boyfriends and girlfriends.

Limited research has been conducted to investigate childhood antecedents of anxiety or depression in adults outside of problematic circumstances such as physical or sexual abuse. For example, Honkalampi et al., (2005) conducted a longitudinal study on females ($N = 835$) to determine if reports of adverse childhood experiences predicted the occurrence of depression two years later. Adverse childhood experiences including poor parental relationships, parental alcohol abuse, harsh discipline, physical punishments, and domestic violence significantly predicted depression at baseline as well as at follow-up. In addition, Tunnard et al., (2014) found that in a sample of 137 patients admitted to the National Affective Disorders Unit, Major Depressive Disorder and Bipolar Disorder were significantly associated with those who reported childhood physical or sexual abuse, even after adjusting

for clinical factors. While this study utilized retrospective reports to determine abuse, good reliability was found when patients completed the Childhood Experience of Care and Abuse Scale.

Despite these extreme circumstances, children raised under relatively normal conditions may still be prone to symptoms of anxiety and depression as adults. For example, parenting styles contribute to the daily cognitions and behaviors of children, and have been implicated as significant predictors of psychopathology in childhood.

Parenting Styles

Baumrind (1967) formulated an orthogonal system of parenting styles based on dimensions of expressions of warmth/indifference (support), levels of discipline (over control or abuse), communication, and expectations of maturity. Over time, these styles have been further specified and delineated leading us to a general understanding of the benefits and consequences of each.

Authoritative Parenting. Authoritative parenting is identified by moderate levels of all factors. Authoritative parenting is described as parental acceptance, non-punitive discipline practices, and encouraging of independence while outlining healthy boundaries and rules. Authoritative parenting is most associated with positive outcomes including healthy psychosocial development, fewer self-regulation problems, and increased academic achievement. For example, Gray and Steinberg (1999) analyzed behaviors and authoritative parenting factors of 10,000 fourteen to eighteen-year-olds via self-report measures. Results from correlational analysis revealed that strictness and supervision was related to higher

levels of emotional distress and poor behavior by adolescents. Further, parental involvement and warmth facilitated academic success, healthy identities, and avoiding risky behaviors. A recent study by Kudo, Longhofer, and Floersch (2012) even determined that components of authoritative parenting are associated with leadership potential in adolescents.

Authoritarian Parenting. Authoritarian parenting is identified by low levels of warmth, high levels of indifference, poor communication in discipline reasoning, high levels of over control/abuse, and high expectations of maturity. Parents who utilize this form of parenting are likely to use corporal punishment and provide little in the way of nurturance or feedback. Unreasonable demands and conformity lead this type of parental relationship. This form of parenting has been shown to have negative effects on child cognition (Meyer et al., 2015), social competence (Gagnon et al., 2014), as well as internalizing and externalizing behaviors (Rinaldi & Howe, 2012).

Permissive Parenting. Permissive parenting is described as high levels of warmth, little demandingness and discipline, and poor communication. These children often lack the discipline to make informed and positive choices, and the emotional support needed to found healthy identities. For example, in a longitudinal Swedish study, both parents completed self-reports measures to assess parenting style during their child's mid-adolescence, while their children's delinquent behavior was assessed by self-report 5 and 10 years later (Hoeve, Semon Dubas, Gerris, Van der Laan, & Smeenk, 2011). Permissive paternal parenting was associated with delinquent behavior in boys' during the adolescent and early adult period, while only in the adolescent period for girls, after controlling for economic factors.

Neglectful Parenting. Neglectful parenting is a combination of low levels of both factors: warmth and demandingness. These parents may provide basic needs such as housing and food, but little else in the way of emotional support, expectations, or discipline. While this form of parenting is least common, it is most associated with negative outcomes for children. Hoeve et al., (2011) found that neglectful parenting by both parents was most associated with high levels of delinquent behavior in late adolescent and early adulthood boys.

<i>Parenting Styles</i>	Supportive Parent is accepting and child-centered	Unsupportive Parent is rejecting and parent-centered
Demanding Parent expects much of child	Authoritative Relationship is about building mutual trust and respect, both perspectives honored, communication flows both ways	Authoritarian Relationship is about control, differing perspectives are not allowed, meaningful communication generally flows one way
Undemanding Parent expects little of child	Permissive Relationship indulges the child, entitlement, little control exercised	Uninvolved/Neglectful Relationship is non-existent, no communication, no parenting

Peer Relationships

Recent public outcry related to bullying and social media has triggered a new line of research concerning childhood experiences (Festl, & Quandt, 2016; Görzig, 2016). Various difficulties have been found in children who experience poor peer relationships, particularly victimization and bullying. Many experiencing these unkind behaviors from classmates have been found to be susceptible to symptoms of Post-Traumatic Stress Disorder (Litman, 2015), psychosomatic, psychosocial (Fekkes, Pijpers, Fredriks, Vogels, & Verloove-Vanhorick, 2006) and internalizing disorders (Arseneault, 2008).

Peer Bullying/Victimization. Prinstein and Aikins (2004) examined a group of 158 adolescents aged fifteen to seventeen years for peer acceptance/rejection, peer relation importance, and depressive symptoms. Eighteen months later, the same adolescents completed the depressive symptoms questionnaire again. Correlational analysis revealed that peer rejection was a significant longitudinal predictor of depressive symptoms, particularly when the participants subscribed to high levels of peer relation importance.

Further to the psychological symptoms, these children dread attending class with their bullies, and therefore begin failing academically. For example, Kowalski and Limber (2013) assessed nine hundred and thirty-one adolescents' experiences with traditional bullying and cyberbullying to compare with their academic performance, school attendance, self-esteem, depression, anxiety, and physical well-being. Twenty-one percent of respondents reported partaking in cyberbullying as either victim, bully, or both at least once in the last two months, compared to 51% in a traditional bullying format. Despite the discordance in frequency, the physical, psychological, and academic consequences were consistent between the two forums. Both forms of victimization and bullying were predictive of psychological symptoms, poorer academic performance, and health problems, but students that reported being both bullies and victims reported the highest number of disturbances.

Prosocial Behavior. Prosocial behavior has been shown to have some mediating effects on some of these deleterious peer relationships. In a longitudinal study conducted by Griese, Buhs, and Lester (2016), the trajectories of prosocial behavior in over 1,000 third to sixth graders, and their corresponding levels of peer victimization were assessed. Results

revealed three resiliency groups of students. The Resilient class started third grade with incredibly higher levels of peer victimization and high stable levels of prosocial behavior. By sixth grade, the level of peer victimization had dramatically reduced and prosocial behavior remained stable. The Normative group exhibited moderate levels of both prosocial and peer victimization behavior, but did experience a slight decrease in victimization by sixth grade. The At-Risk group started with moderate levels of prosocial behavior and victimization, but experienced significantly more victimization and less prosocial behavior by the sixth grade. Prosocial behavior can have mediating and resiliency effects on adverse consequences to victimization, but are also subject to other protective factors like aggression and attitudes towards their environment.

Given the severity of psychopathology found in the atypical range of social interactions between children and their parents and peers, it would not be implausible to posit that these children would continue to experience anxiety or depressive symptoms into young adulthood. The ability to identify deleterious factors in advance provides the opportunity to utilize appropriate intervention techniques.

The Current Study

Little research has been conducted to assess reliability and validity of retrospective measures, but of those that have, limitations are confined to detailed information, not overall perception (Kazemian & Farrington, 2005). Many researchers utilize this technique despite the limitations because the perception of certain conditions by children can be more revealing

than the actual circumstances. Due to the lack of research in retrospective reporting, I was left with unanswered questions:

RQ1: Is there a correlation between retrospective measures of perceived parenting styles and depression symptomatology?

RQ2: Is there a correlation between retrospective measures of perceived parenting styles and anxiety symptomatology?

RQ3: Is there a correlation between retrospective measures of perceived peer relationships and depression symptomatology?

RQ4: Is there a correlation between retrospective measures of perceived peer relationships and anxiety symptomatology?

The current study sought to address such questions by investigating college students' retrospective reports of childhood parenting style, and quality of peer relationships with associations of current anxiety and/or depression symptomatology. Due to the exploratory nature, the childhood relationship factors will be analyzed separately, and the investigator sought to address each research question with separate hypotheses.

H1: It is hypothesized that those who perceived high levels of over control and abuse from their parents will report more symptoms of anxiety years after childhood.

H2: It is hypothesized that those who perceived high levels of over control and abuse from their parents will report more symptoms of depression years after childhood.

H3: It is hypothesized that those who perceived poor past peer relationships, including high instances of victimization, will report a positive correlation with anxiety symptoms years after childhood.

H4: It was also hypothesized that those who perceived poor past peer relationships, including high instances of victimization, will report a positive correlation with depression symptoms years after childhood.

METHOD

Participants

Two hundred six participants were recruited from a mid-sized university in the southwestern United States ($M = 19.90$ years, $SD = 3.26$ years, 71.8% Female). The sample consisted of 49.5% Caucasian, 37.9% Hispanic, 10.7% African American, and 1.9% Asian individuals. All participants were recruited through the SONA system hosted by Angelo State University, and linked to the survey hosting site “PsychData”. Participants volunteered to fulfill a course requirement or receive extra credit for a psychology course. All participant data was de-identified as is required by the Institutional Review Board to maintain confidentiality.

Materials

Descriptive Data. All participants completed a basic demographic questionnaire requesting information about age, gender, ethnicity, and collegiate year (*Appendix A*).

Symptoms of Generalized Anxiety. Participants completed the Generalized Anxiety Disorder – 7 (GAD-7) in order to assess current anxiety symptoms over the previous two weeks (Spitzer, Kroenke, Williams, & Löwe, 2006). This 7-item measure asks participants to rate the degree that they identify with statements such as “Worrying too much about different things” and “Not being able to stop or control worrying” with a 4-point scale (1 = “not at all”, 4 = “nearly every day”). Scores on the GAD-7 range from 0 to 21, with a score of 10 indicating the presence of symptoms indicative of generalized anxiety disorder. Internal consistency reliability scores of the GAD-7 have typically been high (Cronbach $\alpha = .92$;

Spitzer, Kroenke, Williams, & Löwe, 2006) and in the current study reliability was found to exceed .9 and is considered excellent ($\alpha = .93$).

Symptoms of Depression. In order to assess current depression symptoms, participants completed the 10-item Center for Epidemiologic Studies Short Depression Scale (CES-D 10; Radloff, 1977). The CES-D 10 requires the participant to rate how frequently over the last week they identified with statements such as “I felt that everything I did was an effort” and “My sleep was restless” on a 4-point scale (1 = “rarely”, 4 = “all the time”). The 10-item scale has a possible range of 0 to 30, with a score of ten or higher indicating the presence of significant depressive symptoms. Reliability of this scale has been shown to be satisfactory in previous studies (Cronbach $\alpha = .88$; Zhang et al., 2012). In the current study, reliability was found to exceed .8 and is considered good ($\alpha = .83$).

Retrospective Peer-Relationships. To assess childhood peer relationships, participants completed the modified 12-item Peer Relations Questionnaire (PRQ; Rigby & Slee, 1993). The PRQ contains three subscales that assess bullying, victimization, and prosocial behavior up to age fourteen. Participants are asked to rate how well they identify with statements including “Others make fun of me” and “I am part of a group that goes round teasing others” on a 4-point scale ranging from “Never” to “Very Often”. Reliability in previous studies for each subscale (bullying, victimization, and prosocial) has been found to exceed .7 and is considered adequate ($\alpha = .75, .86$, and $.71$, respectively; Rigby & Slee, 1993). In the current study, reliability for the PRQ subscales (bullying, victimization, and

prosocial) in this study was found to range from questionable to good ($\alpha = .79, .88$, and $.64$, respectively).

Retrospective Parenting Style. In an effort to understand perceived parenting style factors of both parents, participants were asked to complete the Measure of Parental Style (MOPS; Parker et al., 1997). The MOPS contains three subscales to measure parental over control, abuse, and indifference similarly to Baumrind's (1967) Parenting Style Dimensions (authoritative, authoritarian, permissive, and neglectful) for both mother and father. The 30-item retrospective measure asks the participant to rate each parents' behavior for the first sixteen years of their life on a 4-point scale (0 = not at all true, 3 = extremely true) and includes statements such as "Sought to make me feel guilty" and "Overprotective of me". Responses were summed across categories and ranges of high or low were assigned for each parent and category separately. Reliability for the MOPS father subscale was found to exceed $.9$ and is considered excellent ($\alpha = .92$) and reliability for the mother subscale was found to exceed $.8$ and is considered good ($\alpha = .89$).

Procedure

The investigator sought to complete this study in an online format. Participants were directed to the questionnaire hosting site "PsychData" through the SONA recruitment system. After informed consent was obtained, participants completed the demographic questionnaire, followed by the CES-D 10, the GAD-7, the PRQ, and finally the MOPS. The questionnaires were estimated to take 45 minutes to complete. Last, participants were fully debriefed and awarded one research credit.

The data were then cleaned, coded, and analyzed. Due to exploratory nature of the data, we opted not to categorize the parenting style factors, but did want to elucidate the higher and lower ends of the spectrum. Therefore, parent measures were coded into high and low categories based on the median values reported for each subscale. Peer relationship subscale values were added to create a combined assessment for each. Lastly, scores for both depression and anxiety were calculated.

RESULTS

Correlation

A Pearson correlation (*Table 1*) was conducted to assess the relationship between childhood peer relationships and current depression and generalized anxiety symptoms. There was a positive correlation between current depression symptomatology and childhood bullying, $r(206) = .231, p = .001$, as well as victimization, $r(206) = .268, p = .000$. Similarly, generalized anxiety symptoms were also positively correlated with victimization, $r(206) = .261, p = .000$, but not bullying. Neither anxiety nor depression were significantly correlated with prosocial behavior. Prosocial behavior was not significantly correlated with any factor, but did have a very mild negative correlation with victimization.

MANOVA

A series of one-way Multivariate Analysis of Variances (MANOVA; *Figures 1 & 2*) were conducted on the high and low categories of the six retrospective parenting style variables on depression and anxiety scores. The six parenting style factors were: mother's over control, indifference, abuse, and father's over control, indifference, and abuse. A one-way multivariate analysis of variance on mother's over control (high vs. low) revealed a significant main effect for depression and anxiety conditions, as indicated by Wilks' Lambda = .939, $F(2, 203) = 6.64, p = .002$, partial eta squared = .061. Power to detect the effect was .91. Significant univariate effects were obtained for both depression, $F(1, 204) = 12.17, p = .001$ and anxiety scores, $F(1, 204) = 10.78, p = .001$. Participants who assigned higher ratings of over control to their mother had significantly higher levels of depression ($M =$

12.40, $SD = 6.538$) than those reporting lower levels of over control ($M = 9.44$, $SD = 5.644$). GAD scores indicated the same finding between high ($M = 10.40$, $SD = 6.298$) and low ($M = 7.65$, $SD = 5.72$) over control.

A one-way multivariate analysis of variance on mother's indifference (high vs. low) revealed a significant main effect for depression and anxiety conditions, as indicated by Wilks' Lambda = .95, $F(2, 203) = 5.36$, $p = .005$, partial eta squared = .5. Power to detect the effect was .837. Significant univariate effects were obtained for depression, $F(1, 204) = 7.45$, $p = .000$ and anxiety scores, $F(1, 204) = 10.78$, $p = .000$. Participants reported significant differences between depression scores and reports of mother's high ($M = 12.58$, $SD = 6.68$) and low ($M = 9.75$, $SD = 5.72$) indifference. Similarly, participants GAD scores differed significantly in those who reported high levels of mother indifference ($M = 10.41$, $SD = 6.31$) compared to those who reported low indifference ($M = 8.04$, $SD = 5.87$).

In addition, one-way multivariate analysis of variance on mother's abuse (high vs. low) revealed a significant main effect for depression and anxiety conditions, as indicated by Wilks' Lambda = .88, $F(2, 203) = 13.32$, $p = .000$, partial eta squared = .116. Power to detect the effect was .998. Univariate analysis revealed significant effects for both depression, $F(1, 204) = 26.77$, $p = .000$ and anxiety scores, $F(1, 204) = 14.34$, $p = .000$. Post hoc analysis revealed a significant difference in depression scores of those who reported higher levels of mother abuse ($M = 13.76$, $SD = 6.77$) compared to those with low ratings ($M = 9.30$, $SD = 5.37$). Similarly, GAD scores of those with higher scores of mother abuse ($M = 11.11$, $SD = 6.19$) varied significantly from those with lower scores ($M = 7.81$, $SD = 5.83$).

In addition, one-way multivariate analysis of variance on father's abuse (high vs. low) revealed an insignificant main effect for depression and anxiety conditions, as indicated by Wilk's Lambda = .275, $F(2, 203) = 2.58$, $p = .078$, partial eta squared = .025. Power to detect the effect was .511. However, due to its exploratory nature, I felt the following significant univariate effects were worthy of note. Univariate analysis revealed a significant effect between father's abuse scores and participants' depression, $F(1, 204) = 4.28$, $p = .040$. Depression scores of those who reported high scores of retrospective father abuse differed significantly ($M = 12.33$, $SD = 6.93$) from those who reported lower levels of father abuse ($M = 10.30$, $SD = 5.92$). No other father effects were statistically significant.

Finally, an exploratory one-way multivariate analysis of variance (females vs. males) revealed a significant main effect for depression and anxiety score, Wilks Lambda = .87, $F(2, 203) = 14.87$, $p = .000$, partial eta squared = .128. Power to detect the effect was .999. Further univariate analysis revealed significant effects for both depression, $F(1, 204) = 22.64$, $p = .000$ and anxiety scores, $F(1, 204) = 27.88$, $p = .000$. Females reported higher levels of depression ($M = 12.07$, $SD = 6.37$) compared to males ($M = 7.69$, $SD = 4.66$). Further, females also reported significantly higher scores of general anxiety symptoms ($M = 10.28$, $SD = 6.16$) than did males ($M = 5.55$, $SD = 4.65$).

ANOVA

An extraneous one-way Analysis of Variance (ANOVA) (lower vs. middle vs. upper class) revealed a significant main effect for anxiety scores, $F(2, 203) = 3.54$, $p = .031$ as well as depression scores, $F(2, 203) = 5.33$, $p = .006$. Tukey HSD post hoc comparisons on

anxiety indicated that the mean score for the poor class ($M = 12.56$, $SD = 5.59$) significantly differed from middle class ($M = 8.67$, $SD = 6.09$) and upper middle class ($M = 8.33$, $SD = 6.19$). However, middle class and upper middle class conditions did not differ significantly. Further, Tukey HSD post hoc comparisons revealed that the mean depression score for the poor condition ($M = 15.33$, $SD = 6.14$) significantly differed from the middle class ($M = 10.40$, $SD = 5.89$) and upper middle class ($M = 10.44$, $SD = 6.92$) conditions. The middle class and upper middle class conditions did not differ significantly from each other.

DISCUSSION

This study is one of the first to examine retrospective reports of parenting and peer relationships with current depression and anxiety symptomatology. It was hypothesized that young adults who perceived high levels of parental over control and abuse, and victimization in peer relationships, would report higher instances of anxiety and depression years later. The findings showed some support for the differences between depression and anxiety scores, and parenting style and past peer relationships.

Analyses suggested that perceived mother's parenting factors (over control, abuse, and indifference) do have a significant association with young adult's current depression and anxiety symptoms. This finding is consistent with a longitudinal study conducted by Maselko, Kubzansky, Lipsitt, and Buka (2011), that determined that higher maternal warmth and affection ratings when children were eight months old, was predicative of lower levels of psychological distress in those same children thirty years later. Similarly, Shah and Waller (2000) completed a study to compare the retrospective reports of parenting style factors of depressed individuals and non-depressed individuals. A significant association was found between depressed participants and reports of overprotective and uncaring parenting.

While limited research has been conducted with fathers' parenting influence on their children's psychopathology, a recent longitudinal study has found associations between fathers' permissive parenting at age three, and shame and guilt expressions at age six (Pariset-Sparks, Bufferd, & Klein, 2015). These associations were not found in mother's variables. This finding could be as a result of father's increased household participation and

parenting due to recent cultural shifts in the last thirty years (e.g., Hochschild, & Machung, 2012). Further, Rinaldi and Howe (2012) investigated families' of toddlers and found significant negative associations between fathers' warmth, caring, and fair discipline, and children's externalizing symptoms. It was also determined that father's harsh, overcontrolling parenting was associated positively with children's internalizing behaviors.

Further, retrospective reports of victimization and bullying were positively correlated with depression scores, while anxiety was only positively correlated with victimization. Prosocial behavior was not significantly correlated with either. Previously, victimization has been found to have an immediate and delayed increased effect on depression and anxiety scores of adolescents (Stapinski, Araya, Heron, Montgomery, & Stallard, 2015). Kopala-Sibley, Zuroff, Leybman, and Hope (2013) studied retrospective reports of peer victimization and prosocial behavior to determine if they were predictive of levels of self-criticism and self-reassurance in college students; factors known to be associated with depressive symptomology. Kopola et al., (2013) determined that those who reported higher levels of peer victimization had increased reports of both self-hating and inadequacy self-criticism. Prosocial reports were not associated with either self-criticism factors. However, receipt of prosocial peer behavior was positively associated with self-reassurance, a mediator of depression susceptibility.

The current results suggest that depression and anxiety symptoms can manifest and continue into adulthood as a result of parenting and peer relationships in childhood. These

relationships were considered within normal range, as found in other studies that highlight these incidence (Tunnard et al., 2014; Honkalampi et al., 2005).

Limitations

There were some limitations worthy of note in this study. The primary limitation was the small and limited participant sample. Recruiting from additional locations may make the results more generalizable. However, a university sample is beneficial in this study because not enough time has passed since the events for the recalled memories to be biased and changed. An older sample with more life experience may recall circumstances very differently than they would have at a younger age. Further, some suggest university samples lack generalizability however, they still maintain the ability to identify a phenomenon or relationship between variables when the sample is unbiased toward the measured variables, therefore making the associations reliable (Calder, Phillips, & Tybout, 1981).

Retrospective reports are known as a limitation since they are subject to participant bias however, this can also be construed as the participants' exact perception. Objective data would be more beneficial and contain less potential for biases. Future researchers would also benefit from gathering longitudinal data or parent reports to create a more comprehensive representation of childhood influences on adult psychopathology. Finally, the research may be strengthened if other maladaptive behaviors, such as aggression, were assessed within the same arena to further contribute to the findings related to developmental influence.

Aggression, ADHD, or similar behavioral challenges could have a significant impact on peer

relationships, as well as parental response and stress (Baker, 1994). Parents and peers may respond differently to a child with aggressive tendencies or ADHD than they may otherwise.

While reliability for most of the measures was acceptable to excellent, the prosocial subscale of the PRQ was questionable. Previous studies reported a Cronbach's α value of .64 (Rigby & Slee, 1993). This questionable reliability could be the reason for the lack of significance between prosocial behavior and anxiety or depressive symptoms as found in previous studies (Griese, Buhs, & Lester, 2016).

Implications and Concluding Remarks

This study extended the literature on psychopathology stemming from childhood circumstances. The Cognitive-Behavioral Model, introduced by Beck (1967), asserts that an individual's perception of an event, series of events, or circumstances, can dictate their proceeding psychopathology through consistent distorted and negative thoughts. These perceptions can be evaluated with retrospective measures that allow researchers to examine how individuals perceived their past circumstances, including childhood. By then assessing current psychopathology, researchers may be able to disseminate the factors that may no longer be affecting an individual directly, but may be influencing his or her current psychological symptoms.

These findings have critical implications for the screening and treatment of depression and anxiety symptoms in young adults who have experienced poor childhood relationships. Identification of these past relationships and subsequent psychopathology can help psychologists provide productive treatment options and address the source of

psychological contention. Further, social workers, health professionals, and teachers can provide early intervention to mediate the effects of these poor childhood relationships to thwart chronic future psychopathology. These results further highlight the benefits of utilizing retrospective reports to further the understanding of perception and resultant mental health. However, while this quasi-experimental study found there to be differences between the variables, statistical significance does not equate to clinical significance. While the participants may have exhibited mild to moderate symptoms of depression or anxiety, we were unable to provide diagnostic analyses, and therefore prevalence of either disorder among groups, limiting applicability of the results to the clinical world.

TABLE 1.

Correlations between Depression and GAD Scores and Retrospective Peer Relationships

Variables	1	2	3	4	5
1. Depression Score	-	.742**	.231**	.268**	.001
2. GAD Score	-	-	.135	.261**	.026
3. Bullying	-	-	-	.170*	.037
4. Victimization	-	-	-	-	-.126
5. Prosocial	-	-	-	-	-

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

FIGURE 1.

Significant Retrospective Parenting and Depression Scores

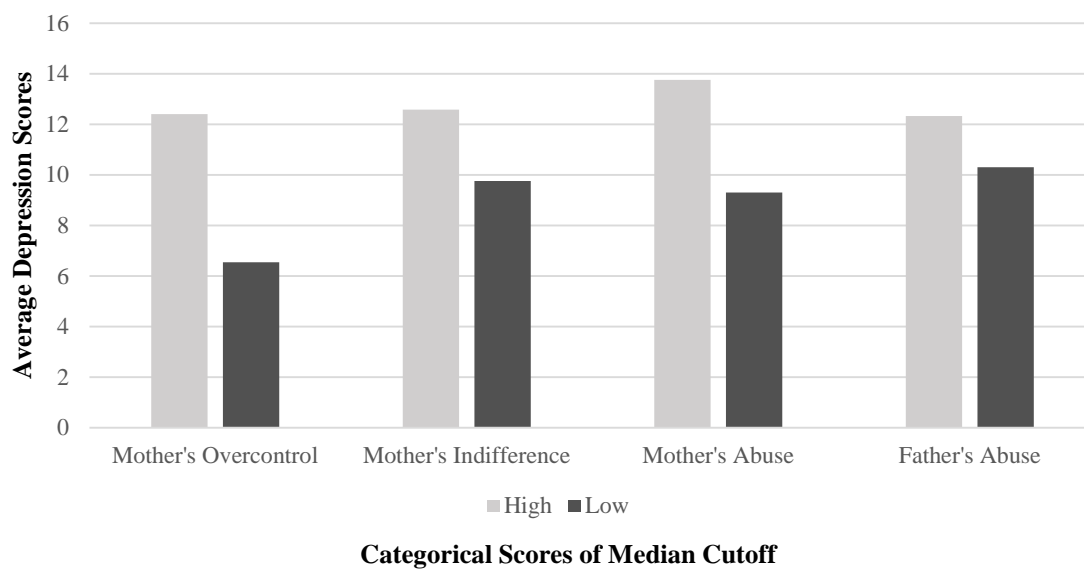
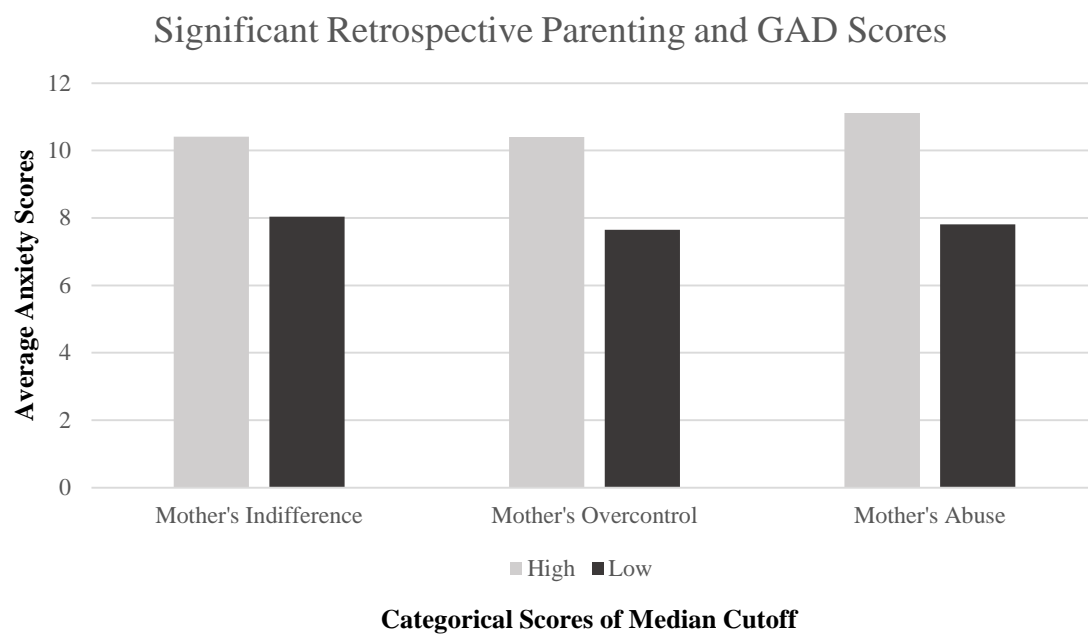


FIGURE 2.



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APPENDIX A

Demographics Questionnaire Part 1

Please indicate your sex:

- Male
- Female

What is your ethnicity?

- Caucasian
- Black/African American
- Hispanic or Latino/a
- Asian/Asian American
- Native Indian
- Other (please specify)

What year are you in school?

- High school
- College first-year
- College second-year
- College third-year
- College fourth-year
- College fifth-year or more
- Graduate student
- Other (please specify)

What is your age? _____

Demographics Questionnaire Part 2

What order were you born in compared to your siblings?

- Only child
- First
- Middle
- Last
- 1st
- 2nd
- 3rd
- 4th
- 5th

Up to age 14, how would you rate your families' economic standing?

- Poor
- Middle class
- Upper middle class
- Wealthy